



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/719,561

11/21/2003

Deane A. Horne

20811.003US

3563

22870

7590

03/06/2006

LAURENCE P. COLTON  
1201 WEST PEACHTREE STREET, NW  
14TH FLOOR  
ATLANTA, GA 30309-3488

EXAMINER

WARTALOWICZ, PAUL A

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/719,561		HORNE ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Paul A. Wartalowicz		1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/21/03</u> .                                                            | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8-11, 14-20, 23, 26-31, and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Myerson et al. (U.S. 5759503).

Myerson et al. teach a process for recovering zinc oxide from a waste material (col. 1, lines 30-35; col. 9, lines 29-37) wherein the waste materials contacted with a reducing gas (col. 10, lines 17-20) wherein the zinc oxide is further purified comprising heating the zinc oxide to a temperature above 271°C (col. 14, lines 36-37) wherein to ensure that the material is free of chloride (col. 14, lines 33-35) wherein the residence time is from 2 to 60 minutes (col. 14, lines 41-44). As to the limitation in claims 28 and 34 wherein the heating of the zinc oxide containing material increases the purity of the zinc oxide without substantially degrading the surface area of the material, Myerson et al. teach wherein the purification process can be controlled to produce zinc oxide having a desired surface area (col. 6, lines 60-62) and wherein the final zinc oxide product is 99.8% pure (col. 7, lines 19-21). As to the limitations wherein the process improves the purity of the zinc containing material from under 60% to over 60% by mass, and wherein the process improves the purity of zinc oxide from under 98% to over 98% by mass, Myerson et al. teach a process wherein the process meets the limitations of the

applicant's invention such that afore mentioned limitations of purity improvements are inherently taught by Myerson et al.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5-7, 12-13, 21-22, 24-25, 32-33, and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myerson et al. (U.S. 5759503) in view of Kindrick (U.S. 4331706).

Myerson et al. teach a process for purifying zinc oxide as described in claims 1, 16, 28, and 34. Myerson et al. fail to teach wherein the time period is greater than 1 hour and wherein the time period is greater than 2 hours and wherein resulting in a zinc oxide product has a surface area of between 3 m<sup>2</sup>/g and 7 m<sup>2</sup>/g and wherein the zinc oxide product has a surface area of between 4 m<sup>2</sup>/g and 6 m<sup>2</sup>/g.

Kindrick, however, teaches a process for the production of zinc oxide pigments (col. 1, lines 13-15) wherein calcination residence times can be varied for the purpose of optimizing the surface area of zinc oxide (col. 5, lines 49-56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the calcination residence times, since it has been held that discovering an optimum value or a result effective variable involved only routine skill in the art. In re Boesch, 617 F.2<sup>nd</sup> 272, 205 USPQ 215 (CCPA 1980). The artisan would have been motivated to vary the calcination residence times by the reasoned explanation that varying the calcination residence time will result in an optimum surface area as desired.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

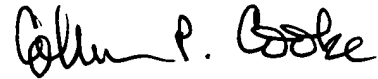
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1754

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Wartalowicz  
February 23, 2006



COLLEEN P. COOKE  
PRIMARY EXAMINER